**Power BI Assignment 3**

1. **List and explain different PowerBi products?**

 **Power BI Desktop:** This is a free application for Windows that allows you to create reports and dashboards using data from various sources. It includes Power Query, Power Pivot, Power View, and Power Map.

 **Power BI Service (Power BI Online):** This is a cloud-based service where you can publish, share, and collaborate on Power BI reports and dashboards. It includes features for sharing, collaboration, and data governance.

 **Power BI Mobile Apps:** These are mobile applications (iOS, Android, Windows) that allow you to view and interact with your Power BI reports and dashboards on the go.

 **Power BI Report Server:** This is an on-premises report server that allows you to host Power BI reports and dashboards within your organization's firewall. It provides similar capabilities to the Power BI Service but is installed and managed locally.

1. **What limitations of Excel, Microsoft solved by PowerBi?**

 **Handling Large Datasets:** Excel can struggle with large volumes of data, whereas Power BI can handle much larger datasets efficiently.

 **Complex Data Transformations:** Power BI's Power Query allows for more advanced data cleaning, shaping, and merging compared to Excel's capabilities.

 **Real-Time Dashboards:** Power BI Service enables real-time data updates and interactive dashboards, which Excel doesn't natively support.

 **Scalability and Performance:** Power BI is designed for scalability and performance in handling complex analytics tasks, whereas Excel can slow down with large datasets and complex calculations.

1. **Explain Power Query?**

**Power Query:** Power Query is a data connectivity and transformation tool within Power BI (and Excel). It allows users to discover, connect, and combine data across a wide variety of sources. Key features include:

* **Data Connectivity:** Easily connect to various data sources such as databases, files, online services, and APIs.
* **Data Transformation:** Clean, reshape, and transform data using an intuitive interface without needing to write complex code.
* **Data Merging:** Combine multiple data sources and tables into one unified dataset for analysis.
* **Query Editor:** Provides a graphical interface for step-by-step data transformation operations.
* **Advanced Features:** Includes capabilities for conditional columns, error handling, and custom functions to automate and enhance data preparation tasks.

1. **Explain Power Map? How powerBi eliminated the need to host SharePoint Server on premises?**

**Power Map:** Power Map is a 3D geospatial visualization tool that allows you to visualize data on a map. Key features include:

Power BI eliminated the need for on-premises SharePoint Server by offering:

* **Cloud-based Service:** Power BI Service is hosted in the cloud by Microsoft, eliminating the need for organizations to manage and maintain their own SharePoint infrastructure.
* **Centralized Data Storage:** Power BI Service provides centralized storage for reports and datasets, accessible from anywhere with an internet connection.
* **Improved Collaboration:** Power BI Service allows for easier sharing, collaboration, and real-time updates of reports and dashboards compared to SharePoint Server's document-centric approach.

1. **Explain the updates done in Power Bi Service (power BI 2.0) as compared to older version?**

Enhanced **User Interface:** Improved navigation and usability with a more intuitive interface for creating, managing, and sharing reports and dashboards.

**Advanced Analytics:** Addition of advanced analytics features such as AI visuals, machine learning integration, and natural language querying.

**Improved Performance:** Faster loading times for reports and dashboards, optimized data refresh schedules, and improved scalability.

**Enhanced Collaboration:** More robust sharing and collaboration features, including granular access controls, commenting, and notifications.

**Integration with Azure Services:** Tighter integration with Azure services for enhanced data connectivity, storage, and security options.